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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

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March 26, 1992

Donna R. Searcy
Secretary
Federal Communications Commission
Room 222
1919 M St., N.W.
Washington, D.C. 20554

Re: EX PARTE SUBMISSION
Administration of the NANP,
CC Docket No. 92-237

Dear Ms. Searcy:

Attached are three contributions submitted at last week's industry meeting on the Future of the Numbering Forum. The first paper, "Numbering in a Competitive Environment: A Short History and Examination," submitted by Sprint, explains the importance of numbering resources in the telecommunications industry and the need for clear public policy direction in the management of these resources. The second submission, also from Sprint, is a flowchart of activity which must occur before numbering resources are allocated. The third submission, a paper by Economics and Technology, Inc. entitled "Numbering Principles for the Balancing of Stakeholder Interests," addresses numbering issues, policies and practices for the immediate and long-term future. Because these attachments are relevant to points raised by Sprint in its pleadings in the above-captioned proceeding, Sprint hereby requests that they be included in the public record on this proceeding.

An original and one copy of this letter are being filed.

Sincerely,

Norina Moy

Norina Moy
Director, Federal Regulatory
Policy and Coordination

cc: Cheryl Tritt, Chief, CCB
Mary Green, Industry Analysis

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Numbering in a Competitive Environment: A Short History and Examination

Ron Havens
Mark Sievers
Sprint Communications

The role of numbering in the provision of telecommunications has changed substantially since the introduction of competition in the provision of service.

his/her geographic exchange code, and the remaining 4 digits identify a particular telephone at a specific location (rather than identifying an individual).

certain portions of the resource (i.e. Exchange codes, also known as Central Office or "CO codes") assigned by the ITOCs or BCCs. Thus, a resource necessary to use the PSTN in support of service is controlled by the Local Exchange Companies (LECs) rather than long distance, cellular, or end user interests. For the most part, LECs determine which users will be assigned resource according to conventions worked out with Bellcore and the BCCs.

This control by a single segment created no issues when service was provided by a vertically integrated, franchised monopoly like the pre-divestiture Bell System. However, with the introduction of competition for provision of service and the possibility of new services such as cellular, the prospect of having a resource critical to all who would provide service controlled by only one segment of the industry has introduced the real possibility of use of that control to inhibit competition from other segments of the industry. In the past there have been real examples of situations where, either knowingly or unknowingly, this has taken place.

For example, in 1989 a number of interexchange carriers (ICs) requested use of an as yet unassigned Interchangeable Numbering Plan Area (INPA) code to be used by foreign telephone administrations to identify a specific IC's network for purposes of completing inbound international calls. This capability is necessary because, in a multi-network environment, with networks operated on a competitive basis by different service providers, different networks may have different service capabilities (e.g. one may support a switched 56 Kbps data service while others do not). And, if the end user depends on the ability to gain access to that unique capability with each call placed from a foreign location, then it is necessary to be able to embed the identity of the desired network provider in the called number, since presubscription and carrier access code methods are not available in foreign networks.

The request was made to Bellcore as the North American Numbering Plan Administrator (NANPA). The request was not satisfied initially, and use of the resource in the manner requested was not granted[1]. This is thought to have occurred at least in part out of a fear on the part of the LEC community that, if ICs were given resource from which they could make their own assignments, they would use this capability to bypass use of the LECs' networks for terminating traffic when INPAs were opened for domestic use in 1995.

There have been long standing disputes over the use of numbering resource for purposes of providing service between non-wireline cellular and LEC segments. In addition there have been disputes regarding changes to the numbering plan (e.g. opening a new area code), and the degree to which the impact on non-wireline services are considered by the LECs when deciding on such changes. Here again the disputes center around access to and use of LEC-controlled CO codes. CO codes are necessary for cellular and wireline carriers to provide service. In the case of non-wireline cellular providers the problem is further complicated by the fact that, in addition

to the reality that the non-wireline cellular services can also be used to bypass LEC services, some of the LECs also hold cellular licenses or have an interest in cellular service providers who are in direct competition with the non-wireline cellular interests, and will charge non-wireline providers for use of CO code resource.

From these two examples it is clear that control of a vital resource like numbering can be used by one segment of the telecommunications industry to slow or completely impede the introduction of service by another segment. It should be noted that these two more recent examples are not unprecedented or unique in the history of the telecommunications industry: The fact that AT&T withheld interconnection to the Bell System's network which would have permitted their IC competitors to offer a service requiring the use of fewer digits, and closer to parity with the number of digits required to complete a long distance call using AT&T's service[2] figured prominently in the court case which ultimately lead to the breakup of the Bell System.

The Regulator's Role

In the case of allocation and use of numbering resource, the regulator's role is to set the policy which determines who will use the resource, and for what purpose(s) it will be used. This role flows from the fact that numbering required to support the PSTN is, like radio spectrum, a finite public resource. It could be argued that numbering is unlike spectrum in that it can be expanded, however such expansion can have such significant investment requirement consequences for the PSTN, that the realities are that numbering is practically a finite resource. For example, while it is possible to develop a system of 11 digit telephone numbers rather than 10, the costs associated with making such a change make it a pragmatic impossibility. Thus, it follows that the regulator should manage, either directly or indirectly, the use of numbering as a finite public resource, either as a competitive or as a monopoly product.

Whither the Natural Monopoly?

Changes in technology have fostered changes in regulation and public policy. For example, in the past it was a change in the cost structure of the provision of long distance service brought about by the development of the use of microwave radio which then made it possible to move from a "natural monopoly" provision for long distance to a competitive environment. Experience with this change in regulation and policy then led to moves to replace the monopoly for provision of local service[3]. A similar change is poised to occur in the industry, though on a much broader scale.

Competition for provision of telecommunications services should be encouraged to the maximum extent possible. The fact that competitive provision of service leads to the lowest price and most responsive providers is well documented in economic literature, and will not be repeated here. There are some aspects of the provision of telecommunications service, given new

advances such as an intelligent network (IN) architecture, which, in the future may require monopoly-like provision.

An IN architecture would be one in which service is provided through a central database. This is an exciting development because it allows much more rapid and cost effective deployment of new services and features. This occurs because the necessary modifications are made only in one or a few places, rather than to each of the around 20,000 switches which comprise the PSTN. When implemented, the network will simply interrogate a central intelligence source in order to gain instructions on how to complete the call. This same structure is necessary to support the user flexibility and mobility envisioned from advances like Personnel Communications Service (PCS).

A possible network configuration in an IN environment would involve a database to house information regarding the identity and appropriate routing to reach a particular user (in the past numbering has been used primarily to designate a geographic location; this was driven largely by technological limitations and is changing). A question raised by this new technology is who should maintain and operate that database? It will, after all, be required as a starting point for provision of all switched services, and will support all segments of the industry (e.g. LECs, Competitive Access Providers or CAPs, ICs, and wireless providers in a PCS environment). Is it possible then that the database should become the new monopoly, with networks competitively provided, but all providers depending on a central database as the user's entry point to access all switched services?

The future is likely to be an industry structure that is comprised of competitively provided network services, with monopoly provision of database services. Through all of this, it is essential that a structure be adopted that minimizes the ability of any one segment of the industry to disadvantage another.

Some Necessary Steps

At the urging of the National Association of Regulatory and Utility Commissioners (NARUC), the Federal Communications Commission (FCC) issued a Notice of Inquiry (NOI)[4] asking, inter alia, who should administer the NANP. The questions posed by the NARUC and carried over into the NOI were all valid questions, but didn't go far enough. In an increasingly competitive industry like telecommunications, there are other, more fundamental questions than simply "who should administer the NANP?", to be asked. In fact, these questions must be answered before a question like "who should administer the NANP?" can adequately be addressed. These questions are really those that should be asked before necessary fundamental public policy directions can be determined and articulated. Among the questions which must be asked, and the opinions of the authors are:

1. Should all networks engaged in service to the public interconnect?

Yes. In an ideal world there should never be a situation where one end user cannot reach another because of the

identities of the individual service providers selected by callers or called parties.

2. In an IN environment, what are competitively provided, and what are monopoly provided services?

Competitively provided services are all telecommunications services, with the exception of, if required by network and service configurations, a central database. The central database, if required to support provision of service by all segments of the telecommunications industry, would be a monopoly function.

3. What are numbers to be used for?

Numbers are used to support the provision of telecommunications services, by any segment of the industry.

4. What services and service providers can assign and use numbers?

Numbers should be assigned to all services and service providers with a demonstrated need for the resource.

5. Who will administer numbers, and what is the mission and role of the administrator?

Number administration should be performed by a central, commonly funded, unbiased numbering administration organization, with oversight and guidance from appropriate governmental agencies charged with telecommunications public policy responsibility.

The mission and role of the administrator is to implement established public policy regarding the assignment and use of the public numbering resource, and to apprise the industry and appropriate governmental agencies responsible for telecommunications public policy of the status of and issues associated with that resource.

6. To what extent will the possible need to conserve numbers be permitted to impede or slow the introduction of new services?

The need to conserve numbers should not be permitted to slow or impede the introduction of new services.

7. If the need to expand capabilities in networks to provide additional numbers is encountered, how will that expansion be funded?

Funding for competitively provided services should come from private sources, with funding for monopoly services provided by the rate payer via the industry, as regulated by appropriate governmental agencies.

8. If a central database is used to support all segments of the industry, how is that database function be provided, funded, and administered?

The database would be provided by an entity or entities under the direction and regulation of appropriate governmental agencies. Funding would be from charges assessed to the users of the database, and would include any service provider requiring the function to provide

service. The means used to recover such charges from the service provider's end users would be left to the business discretion of the service provider making use of the function.

9. How can the regulator assure that the database is funded, operated, and administered in a fair and unbiased fashion?

Charges for the database service would be subject to the examination and approval of appropriate governmental agencies. An informal, all encompassing industry organization, with participation from all materially affected industry members, would be established to advise the administrator and appropriate governmental agencies regarding the funding, methods, and procedures used to provide or modify the service.

10. How are disputes over the funding, operation, and administration of numbers and the database resolved?

Should any user of the function encounter a problem it would first be brought to the industry organization for resolution, with the potential for appeal to the appropriate governmental agency if not satisfied with the industry organization's disposition of the complaint.

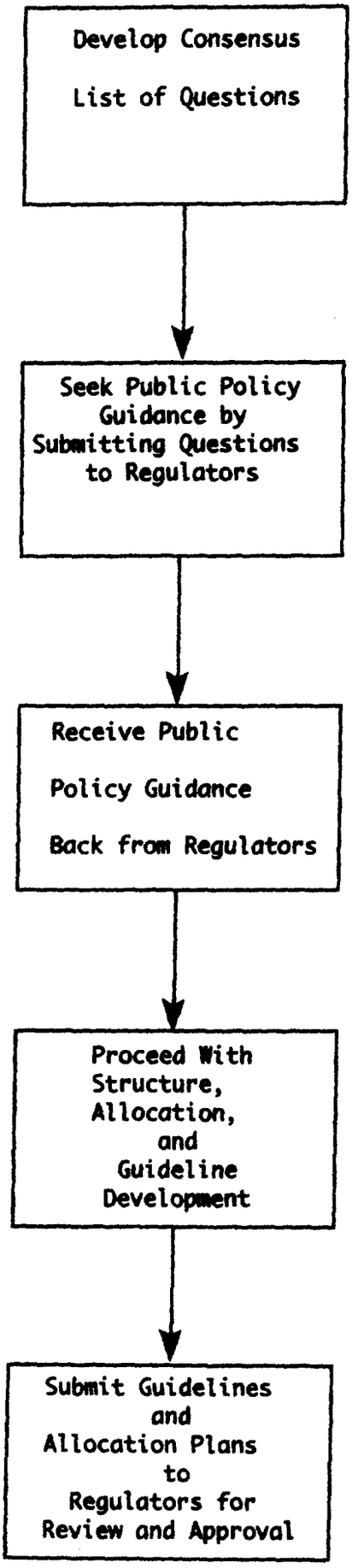
Ideally these questions should be posed to the telecommunications industry and the public at large. In response, the regulator(s) would receive input. This input would then be used to go forward and establish principles that would be used to establish public policy. This step (i.e. establishing guiding principles to be adhered to) is necessary prior to establishing public policy, because in the implementation phase for the public policy it will be necessary to refer back to the principles from time to time, to insure that the directions being taken match the principles agreed upon.

1.The fact that this issue was not successfully resolved has been acknowledged in a Bellcore document, IL-92/01-013, "North American Numbering Plan Administrator's Proposal on the future of Numbering in World Zone 1", January 6, 1992, at page 27.

2. See for example Civil Action No. 74-1698, U.S. vs. AT&T, testimony of Ronald D. Havens, June 10, 1981.

3. See for example FCC Docket 91-141, "In The Matter of Expanded Interconnection with Local Telephone Company Facilities", and a companion Docket, 91-213, "in the Matter of Transport Rate Structure and Pricing."

4.FCC Docket 92-237, "In the Matter of Administration of the North American Numbering Plan."


Develop Consensus
List of Questions
Seek Public Policy Guidance by Submitting Questions to Regulators
Receive Public
Policy Guidance
Back from Regulators
Proceed With Structure, Allocation, and Guideline Development
Submit Guidelines and Allocation Plans to Regulators for Review and Approval

NUMBERING PRINCIPLES FOR THE BALANCING OF STAKEHOLDER INTERESTS

FNF 93-060

a position paper submitted by the

Ad Hoc Telecommunications Users Committee

and the

County of Los Angeles, California

prepared by

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Bellcore "Future of Numbering Forum"
McLean, Virginia • March 16-18, 1993

Introduction

This paper has been prepared on behalf of the Ad Hoc Telecommunications Users Committee ("Ad Hoc") and the County of Los Angeles, California ("LA"). It outlines key user/consumer concerns regarding present and future NANP policies. Both of the sponsoring parties have been actively involved in this issue. Ad Hoc submitted comments in CC Docket 92-105 (the "N11" *NPRM*) and in CC Docket 92-237 (the NANP *NOI*). LA submitted comments to Bellcore on the January, 1992 *Proposal on the Future of Numbering in World Zone 1*. Through these submissions, both of these parties have expressed their strong opposition to the continued role of Bellcore and of the dominant local exchange carriers (usually a BOC) as NANP and NPA Administrators. Participation by Ad Hoc/LA in the present FNF should not be construed in any respect as constituting a modification or waiver of that position. The present position paper will not address the matter of who should administer

[redacted]

5. *Centralization of NANPA responsibility.*

NANPA should be responsible for *assignment* of all geographic and non-geographic NPA and SAC codes. NANPA should be responsible for establishing and for *enforcing* rules and policies with respect to assignment of CO codes within geographic and non-geographic NPAs. Exceptions to standard rules and policies for CO code assignments may be granted by NANPA upon request of any interested party only through formal waiver process, in which opposing views can be submitted and considered.

6. *Reflect industry pricing and rating practices.*

Numbering and rating of individual calls are highly interrelated. Distinctions are made between "local" and "toll" calls, between "intrastate" and "interstate" calls, between "POTS" services and "enhanced" services and, potentially, between landline and mobile services. Numbering and dialing patterns should reflect distinct rating differences in a manner that is easily recognizable to consumers and to automatic equipment.

7. *Numbering and service pricing policies should be independent and transparent with respect to one another.*

Number assignments should not be tied to specific services, nor should the pricing of individual services be influenced by numbering policies. Customers should not be required to accept a service (e.g., switched access) that is not otherwise necessary merely to obtain a particular type of number (e.g., a nation-wide 7-digit number dialable on a 7-digit basis from within any geographic NPA). Conversely, prices of end user services should not be materially influenced by numbering policies (e.g., an area code split may affect the pricing of long distance calling plans that offer discounts to calls placed to one or to a designated number of specific area codes).

8. *Numbering policy should provide no sustematic competitive advantage or disadvantage to any stakeholder.*

Assignment of numbers or dialing protocols should convey no specific competitive advantage nor impose a specific competitive disadvantage upon any party. Special types of numbers whose supply is particularly limited (e.g., "short" numbers) should never be assigned exclusively to any one entity on an exclusive basis.

9. *Abbreviated dialing should be customer-specified, not provider-specified.*

Abbreviated dialing patterns (e.g., the use of 1+ to identify an interexchange carrier, N11 to identify an information service provider, etc.) should be specified by the individual customer on a *presubscription* basis. No abbreviated dialing protocol should be assigned exclusively to any individual service provider or carrier.

10. Economic effects of NANP policies and actions must be considered in NANP decisions.

All proposed changes to or modifications in NANP structure, dialing protocols, area code assignments and splits, CO code designations, and other significant NANP events and actions, shall give full consideration to the costs, administrative burdens, business interruptions and other economic impacts that would be imposed upon all stakeholders. In general, NANPA will undertake to develop and adopt policies that minimize the combined economic impact on all stakeholders. NANPA may consider and adopt proposals which, in order to minimize aggregate impact, may involve the compensation of adversely-impacted stakeholders by others who would be less impacted — or even derive net benefit — from a particular policy initiative.

Specific issues regarding numbering policies

The foregoing principles offer a framework within which specific numbering/dialing protocol issues may be considered. Although far from exhaustive, the following issues are of particular concern to Ad Hoc/LA.

Distinguishing between "local" and "toll" calls.

Ad Hoc/LA believe that the 1+ convention should both be retained and made more consistent as an unambiguous indicator that the call being placed will be subject to toll charges. While the use of 1+ for this purpose has eroded in recent years (particularly since the introduction of interchangeable CO codes in a number of NPAs beginning in the early 1980s), current proposals relating to interchangeable NPA code ("INPA") implementation would virtually eradicate the use of 1+ for toll/local differentiation. Ad Hoc/LA believe that 1+ can *and should* be retained for this purpose.

The 1+ convention provided a convenient means for consumers to ascertain whether calling a particular number would entail a toll charge, and also afforded administrators of PBX systems a simple and consistent algorithm for implementing toll restriction in their systems. Under INPA, however, consumers will not be able to determine the charging status of a particular call unless they look up the code in the local telephone directory;[1] analogously, a PBX will not be able to identify toll calls unless it has been modified to perform this type of screening function *and* maintains an up-to-date table of local (or toll) central office codes. Neither of these will happen without cost and administrative burden to the PBX manager. AT&T has recently quoted prices for modifying its PBX products at between a few hundred dollars to well over $10,000, and this does not include the costs

1. That, of course, assumes that the code will be found there. Codes added after the current directory was printed will not appear until the following year's edition.

of *maintaining* code tables on an ongoing basis over time. A recent study conducted by the British Office of Telecommunications put the cost of premises equipment modifications to accommodate the forthcoming UK numbering change at nearly £200-million, which translates into more than $1-billion after accounting for the size differences of the US and the UK.

In its Comments filed in CC Docket 92-237, Ad Hoc offered an alternative to Bellcore's INPA plan that would make it possible to retain the 1+ prefix on toll calls and to exclude it on all local calls, even those which cross an NPA boundary. The present dialing pattern in use in the Washington, DC metropolitan area demonstrates the fundamental feasibility of such an approach. The key to this arrangement is *not to assign* as CO codes the same sequence of digits associated with either the home or any *adjacent* NPA codes for which local rate treatment applies, and to require that all *toll* calls placed within the Home NPA be dialed on an 11-digit (1-HNPA-NXX-XXXX) basis.[2] Thus, as long as the 202, 703 and 301 codes are *never used as CO codes* within the Washington, DC metropolitan area, stored program control central offices can readily identify calls to these NPAs as local inter-NPA calls without the need for a prefix '1'.[3] While the C&P Telephone Company has adopted this dialing pattern for the present time, it is *not* a recognized approach within the Bellcore NANP standard, and may well be abandoned by C&P in its implementation of INPA. Yet because decisions as to the efficacy of any particular *local* dialing pattern are generally addressed solely at the state PUC level, the potential usefulness of this approach, which would permit full and unambiguous retention of the 1+ prefix as an exclusive toll access digit, has never been formally considered as part of a national standard.

Ad Hoc/LA's proposal would not only alleviate many of the operational concerns engendered by the implementation of interchangeable NPA codes, it would actually

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2. Assignment of a nearby NPA code to a CO code is expressly discouraged so as to minimize the incidence of mis-dialed calls. *See*, Bellcore, *BOC Notes on the LEC Networks - 1990*, p. 3.8. Nevertheless, ETI has identified a total of six (6) situations out of the more than 48,000 NPA-NXX codes presently in use within the NANP in which a home or adjacent NPA is used as a CO code. These are confined to three New York City codes (212-516, 718-718 and 718-917) and three Los Angeles codes (213-714, 818-818 and 818-909). Indeed, the presence of the '818-818' code pair poses a particular problem, in that it potentially creates an ambiguity on intra-NPA 0+ calls, which require the full 11-digit dialing pattern. ('718-718' is not a problem in this regard only because there are no toll routes within the '718' NPA, although a 0+ call would still likely require the full 11 digits.) That cases such as these are present at all testifies to the serious mismanagement of the NANP under the Bellcore/LEC stewardship. In any event, these few codes can be reclaimed, and the impact upon the users of these six relatively new CO codes would be minimal by comparison with the benefit for all NANP users that would result from a uniform and coordinated toll/local identifier.

3. Thus, when a Washington, DC customer dials 408 without a 1+ prefix, the central office will interpret that as a local CO code. But when the customer dials 703 without a 1+ prefix, the central office will interpret that code as the NPA for northern Virginia.

simplify **the** ***existing*** **PBX administrative function. Under the present 1+NPA requirement that exists even for** ***local*** **calls in a number of areas (e.g., New York, Chicago, Los Angeles), the PBX must screen for** ***local*** **'1-NPA-NXX' sequences and pass such calls** ***even where the prefix '1' had been dialed.*** **Under the ETI plan, toll calls would** ***always*** **require a prefix '1', and local calls would** ***never*** **require a prefix '1', even where the call is directed to a different NPA. The following table summarizes all possible combinations of local and toll, intra- and inter-NPA call dialing patterns under this scheme:**

Local call—home NPA		7-digits	NYY-YYYY

specific premium services creates enormous customer confusion and unwanted or unexpected charges, and poses formidable problems in administering dialing and toll restriction arrangements and in managing PBX/Centrex system operations for business and government organizations with multiple locations in different NPAs and/or operating company territories.

One of the largest causes of the variation in NANP implementation and the lack of standardization is the fragmentation of responsibility for NANP administration. At a minimum, strict rules and standards should be established for the assignment of *non-geographic* NXX codes *within* geographic NPAs and/or for HNPA dialing on a 7-digit basis. The use of NXX CO-type codes for services involving premium charges[6] should be expressly prohibited except where specific, uniform codes are established on a national or NANP-wide basis for this purpose.

Standardization in numbering and dialing.

Because there is no central administration of number assignment *within* most NPAs, the

company-wide 7-digit telephone number in conjunction with a pay-per-call type of information service access arrangement, for which a premium charge will apply.[7]

- There is a wide variation in dialing pattern from LEC to LEC for intra- and inter-NPA local and toll calling.

Continued fragmentation of NANP and NPA administration must be replaced by either a single NANP administration function embracing both NPA and CO code assignment or, at the very least, a uniform set of standards and rules must be established *and enforced* if LEC administration of individual geographic NPAs is to continue.

Competitive advantages flowing from number assignments.

In administering code and number assignments within individual NPAs, LECs often favor their own needs over those of their competitors or others. Moreover, while LECs rarely impute charges for number assignments to their own services, they usually impose number use charges upon other entities. For example, LECs typically do not impute a number charge for Centrex service, whereas they do apply such charges for DID services furnished by the LEC to a user of a competitively-provided PBX. LECs may be far more willing to reserve numbers and codes for their own use, but typically resist, or impose substantial charges to satisfy, such reservation requests received from other entities and from end users.

The general concern regarding preemptive advantage to LECs also extends to other NANP stakeholders. The "N11" controversy is a case in point. Here, certain individual providers have sought preemptive access to an extremely limited supply of clearly advantageous "short" numbers which, if assigned to them, would preclude use of these numbers by the LECs' competitors. To be sure, certain types of numbers are more easily remembered than others, but the "marketing" of a number should be the manner in which its owner gains presence and visibility, not the assignment of an intrinsically superior number.

7. Thus, a New York Telephone '540' "Interactive Information Network Service" access number may be dialed on a 7-digit basis from any NYT NPA in which the customer has ordered this service. PSC No. 900, Section 2, p. 47 *et seq.*

The societal costs of specific NANP actions.

Ad Hoc/LA agree that the costs of NANP administration should be broadly shared among all stakeholders. Eclipsing the direct costs of the NANPA function, however, are the potentially enormous costs that will fall upon individual NANP users arising out of any number changes.[8] None of these costs are internal either to Bellcore or to its owners, and it is therefore not surprising that NANPA as well as the individual LECs persist in ignoring the costs and impacts to which NANP users will be subjected.

Ad Hoc/LA take note of a study commissioned and recently released by the United Kingdom Office of Telecommunications (Oftel) specifically addressing the cost and other impacts of the forthcoming (April, 1995) UK numbering change upon customer premises equipment. The Oftel study identified some £197-million in conversion and equipment replacement/upgrade costs.[9] Extrapolating for the relative sizes of the two countries and converting to US funds, the Oftel results would imply a CPE impact in the US well in excess of $1-billion. The prospect of imposing costs of this magnitude upon telecommunications users should not be lightly dismissed and, at the very least, deserves further study by the Commission before it is unilaterally — and perhaps unnecessarily — forced upon the already-weak US economy.

Local number portability.

In principle, the idea of "number portability" seems quite appealing. Like the name of an individual or a business, a telephone number comes to uniquely identify the residential or business customer to whom it has been assigned. The ability to control the assignment of telephone numbers affords the entity exercising this power considerable market advantage. The industry is in the final stages of implementation of "800 number portability" by the replacement of so-called "NXX" access with "database" access to 800 numbers. An 800 Service customer will soon be permitted to change his carrier without also accepting a number change; an 800 Service customer desiring a particular "vanity" number sequence will no longer be required to take the service from the interexchange carrier that happens to "own" the NXX code corresponding with the desired letter/number sequence. In a similar vein, local number portability will eliminate the ability of a LEC to leverage its control of number assignments so as to prevent its customers from changing carriers, if, as and when an alternative local exchange carrier becomes available.

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8. *See* Ad Hoc Committee *Initial Comments*, CC Docket 92-237, at 16-17.

9. United Kingdom Office of Telecommunications, *UK National Code Change Customer Premises Equipment Implications* (1992), at 13.

Number portability clearly offers many important service opportunities and will likely contribute to a more competitive marketplace. However, notwithstanding its merits as an abstract matter, uniquitous local number portability will not happen without significant cost, and the FCC should not authorize major technological commitments or adopt policies with significant costs and impacts without a comprehensive and accurate assessment as to their magnitude. Ad Hoc/LA note, for example, that the Commission's initial adoption of 800 number portability expressly relied upon explicit BOC representations as to the almost insignificant costs of its implementation:

> All of the BOCs filed projected revenue requirements for data base 800 access service. According to these projections, *the total interstate annual revenue requirement for 800 access service for the seven BOCs combined will be approximately $20 Million.*[10]

Moreover, even after it proposed, and subsequently imposed, certain additional requirements upon the BOCs with respect to coverage, post-dial delay, and other matters, no material cost impact beyond the previously-cited finding was identified by the Commission.[11] Now, however, on the eve of actual implementation of 800 data base access, the BOCs seek to revise — and by a substantial amount — the cost assessment upon which the Commission's adoption of 800 number portability had been predicated. Extrapolating from a submission recently made to the FCC by Pacific Bell,[12] the cost of 800 database access is now being portrayed as amounting to more than $2-billion through

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10. *Provision of Access for 800 Service*, CC Docket No. 86-10, 4 FCC Rcd 2824 (1989). Emphasis supplied, footnotes omitted.

11. *Id.*, *Recommendation and Second Supplemental Notice of Proposed Rulemaking*, 6 FCC Rcd 5421 (1991).

12. *See* Pacific Bell *ex parte* filing dated December 28, 1992, in CC Docket 86-10, filed in support of the Company's position that the costs it incurs in implementing the 800 Database Service should be treated as exogenous Z-adjustments under the Commission's Price Cap system. In that filing, Pacific asserted that "[t]he SS7 investment and expense associated with the FCC mandated implementation of 800 Database Service will reach $353M [million] by 1995. These costs have been incurred by Pacific in order to deploy an SS7 network that meets the Commission's access delay standards. In fact, Pacific has developed equipment and facilities specifically for 800 Database Service which offer capabilities previously unavailable in the network." Previously, that same RBOC had given this Commission a considerably lower assessment of 800 Database costs: "*Dedicated 800 Data Base costs are relatively minor.* The Commission has asked for comments concerning the projected costs of implementing and deploying 800 Data Base Service. The investment associated with the SCPs and the SMS are specific to 800 Data Base Service ... The total net investment for the SCPs and the SMS is approximately $16 million. The related total expense for the initial implementation of the 800 data base plan through 1989 is approximately $16 million. These costs translate into an initial interstate revenue requirement for 1989 of approximately $3.7 million. This represents only 0.2 percent of Pacific Bell's 1.7 billion interstate revenue requirement ..." CC Docket 86-10, Comments, Pacific Bell comment, April 4, 1988, at 40-41. Emphasis in original, footnotes omitted.

1995.[13] With nearly one hundred times as many local and toll calls directed to ordinary NANP numbers as those dialed to '800' numbers, the price tag for "local number portability" could, on the basis of the BOCs' latest figures, easily top $20-billion.

Significantly, proposals for local number portability are not demand driven in any meaningful sense. The actual extent of consumer interest in "portable" non-800 telephone number services is not known at this time,[14] and in any event the extent of such demand will certainly be influenced by price. There is no evidence that US consumers or business users want — or are willing to pay for — ubiquitous number portability at any price. Further, without comprehensive and accurate estimates of the total cost — to all sectors of the telecommunications industry — attendant to local number portability — there is no present means to determine that the benefits of ubiquitous number portability will exceed its costs, particularly for customers and applications where such an arrangement is not *per se* essential. Further, a distinction must be made between *geographic* portability (which specialized services like AT&T's "Easy Reach" and MCI's "Follow-Me 800" can support) and *provider* portability, in which a customer can change carrier without having to change telephone number. Indeed, despite the obvious interest of nascent local exchange competitors in this latter form of number portability, Ad Hoc/LA expect that their demand as well will be highly sensitive to price.

Indeed, to the extent that the desire for ubiquitous local number portability has already served to motivate INPA implementation and other fundamental NANP modifications,[15] consumers and business telecommunications users *are already being forced to incur costs*, both within their own operations and through payments for LEC and other services, for a

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13. While the use of this extrapolation is necessarily limited to providing an order-of-magnitude collective picture of the BOCs' latest claims, Ad Hoc/LA strongly dispute their veracity. Revised cost projections such as those proffered by Pacific are being advanced by the BOCs in support of *rates* that bear no relationship with the *costs* they had previously identified to the Commission and upon which the Commission expressly found 800 number portability to produce positive net benefits to the public. Without reiterating the Ad Hoc Committee's specific challenges to the veracity of these "revised" cost estimates, their very existence as "after-the-fact" attempts to recover purported costs in excess of those upon which important technology decisions were based poses serious cause for concern. The Commission should demand accurate cost and impact projections before it launches a new technological initiative, and should hold the carriers responsible, *after the fact*, for those cost estimates when considering and approving specific rate treatment.

14. AT&T's "Easy Reach" service and MCI's "Follow Me" personal 800 service are examples of such offerings; both currently have extremely small levels of market penetration.

15. Under the plan described in the Second Edition of Bellcore's *Proposal on the Future of Numbering in World Zone 1*, fully one-half of the four new NPA blocks that will be initially be made available (N2X, N3X, N8X and N9X) would be reserved for "portable" telephone numbers. The remaining four blocks (N4X, N5X, N6X and N7X) could be assigned either geographically or for portable applications, as demand warrants. Thus, as many as 75% of the new INPA codes could in principle be earmarked for "portable" non-geographic assignment.

capability — ubiquitous number portability — the actual demand for which has never been demonstrated. If there is in fact a public demand for this new network capability, then that should be tested in the marketplace before costs are incurred and are unilaterally imposed upon telecommunications users.

While Ad Hoc/LA do not oppose efforts to consider accommodating portable and other non-geographic number assignments within an expanded NANP, they urge that a determination be made, *at the outset*, that the various NANP modifications being proposed and/or implemented at this time are driven by *bona fide* demands of the marketplace, and not merely by the strategic designs of the existing local exchange monopolies.

Conclusion

Ad Hoc/LA believe that the proliferation of stakeholders and the numerous and complex interactions between numbering policy and broader telecommunications regulation and policy issues require a far broader examination of the future of numbering than will be possible in a "Forum" such as this. Accordingly, while these parties intend to participate fully and to contribute constructively to the present discussions and deliberations, they continue to believe that specific, affirmative, *and expeditious* [redacted] that the mere existence of this "Future of Numbering Forum" not be used as a rationale for postponing affirmative FCC [redacted]